PROJECT 1

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The solution to Project 1 is uploaded on my github account as *ABB RobotStudio - Present.rsag*. It is based on *VRM_RS_Project_template*. In this simulation, there are two robots IRB 1200 (reach 0.9) with the first one having ABB Smart Gripper with two vacuum cups and the second one ABB Smart Gripper with fingers and one vacuum cup.

1 Robot 1 (right)

Robot 1 is placed on a table with three desks (one gray with a handle and two wooden ones) and six colored blocks. Each pair of block is a different color - yellow, orange and red. The user inputs in RAPID main program the colors of blocks they want to move (0 - yellow, 1 - orange, 2 - red). If the input number does not correspond with any color, the spot is left empty.

Robot first moves the gray desk to the conveyor belt, then picks the chosen colored blocks and places them in the designated spots on the gray desk. After that, the conveyor belt starts to move and Robot 1 returns to its home position.

2 Robot 2 (left)

Robot 2 is placed on a table on the other end of the conveyor belt. Along with the robot there is a wooden box, its lid and a red bow.

At the beginning, robot 2 moves to its starting position. Then it waits until the gray desk send by robot 1 reaches the end of the conveyor belt when a sensor stops the desks' movement. Robot 2 then grabs the handle of the gray desk and places it in the wooden box. Then it uses the vacuum cup to close the box with the lid and at the end places a red bow on top of the box.

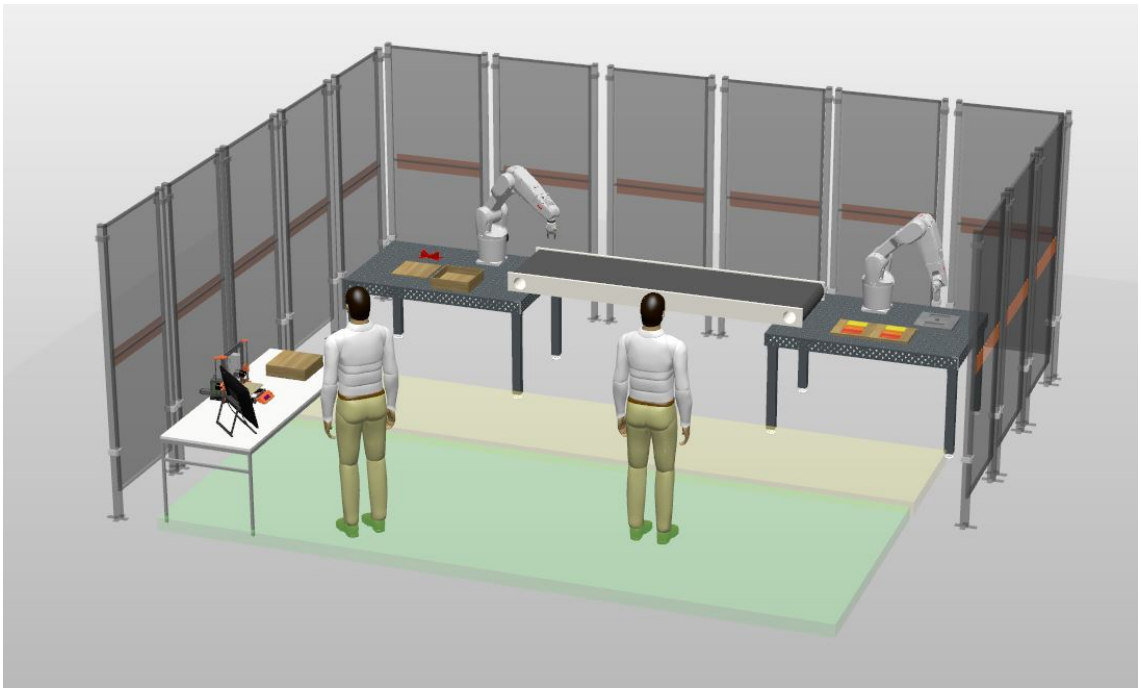

Figure 1: Working environment